2.8 Greenhouse Gas Emissions

This section describes the existing conditions in the unincorporated county related to GHG emissions and the potential effects that implementation of the CAP Update may have related to GHG emissions. Specifically, this section presents a summary of regulations applicable to GHG emissions, a summary of climate change science and GHG sources in California and San Diego County, and a discussion of the project's potential GHG emissions and their potential contribution to global climate change. Potential impacts of the project are analyzed, and mitigation measures are provided for those impacts determined to be significant. Because this analysis is subsequent to the adopted 2011 GPU PEIR, the evaluation of impacts focuses on the potential for implementation of the CAP Update to result in new or substantially more severe impacts than presented in the 2011 GPU PEIR, given the changes to the General Plan proposed by the CAP Update and changes in environmental and regulatory conditions that have occurred since the certification of the 2011 GPU PEIR.

This section incorporates by reference the climate change setting and impact analysis from the 2011 GPU PEIR as it applies to the CAP Update and supplements with relevant setting conditions that have changed since certification of the 2011 GPU PEIR. The 2011 GPU PEIR evaluated the General Plan's compliance with Assembly Bill (AB) 32; however, since the certification of the 2011 GPU PEIR, new legislation has been adopted in the state of California that set new long-term reduction targets for the state (i.e., Senate Bill [SB] 32 and AB 1279). Therefore, Issue 1: Compliance with AB 32, has been updated to reflect the state's newest long-term reduction goals mandated by SB 32 and AB 1279. The 2022 Scoping Plan contains language that indicates that the initial goal of SB 32 (i.e., reducing 1990 emissions by 40 percent by 2030) would likely need to be revised to meeting a 48 percent reduction in 1990 emission levels by 2030 to meet the ultimate goals of AB 1279 (i.e., reducing 1990 emissions by 85 percent by 2045 and achieve carbon neutrality by no later than 2045). While not codified by formal legislation, this reduction target is notable and considered in the evaluation of the CAP Update. This is evaluated in Issue 2. Issue 1 of this analysis details whether the proposed CAP Update would generate emissions of GHGs, either directly or indirectly, that may have a significant impact on the environment.

Additionally, the 2011 GPU PEIR evaluated the potential effects of global climate change on the General Plan; however, in 2015, the California Supreme Court issued its decision in the *California Building Industry Association v. Bay Area Air Quality Management District* 62 Cal.4th (2015), indicating that according to CEQA statute, projects are not required to analyze the effect of the environment on a project, unless a project's incremental contribution of environmental impacts would exacerbate an existing adverse environmental condition. Given that the purpose of the CAP Update is to reduce GHG emissions within the county, no separate CEQA analysis of the change in effects of climate change on the General Plan due to CAP Update implementation is necessary.

Table 2.8-1 summarizes the impact conclusions reached in the 2011 GPU PEIR and identifies if a new or more severe significant impact would occur with implementation of the CAP Update. As indicated, implementation of the proposed project would not result in new or more severe significant impacts on climate change.

Table 2.8-1 Summary of Climate Change–Related Impacts

Issue Number	Issue Topic[1,2]	Determination from 2011 GPU PEIR	CAP Update SEIR Determination	
			New or More Severe Significant Impact Prior to Mitigation	New or More Severe Significant Impact After Mitigation
1	GHG Emissions That May Have a Significant Impact on the Environment	General Plan Only: Less Than Significant with Mitigation Incorporated	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Less Than Significant with Mitigation Incorporated	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No
2	Conflict with an Applicable Plan, Policy, or Regulation for Reducing the Emission of GHGs	General Plan Only: Less Than Significant with Mitigation Incorporated	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Less Than Significant with Mitigation Incorporated	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No

Notes: AB = Assembly Bill; CAP = Climate Action Plan; GPU = General Plan Update; PEIR = Program Environmental Impact Report; SEIR = Supplemental Environmental Impact Report.

[1] The 2011 GPU PEIR (Issue 1) evaluated the General Plan's compliance with Assembly Bill (AB) 32. However, since the certification of the 2011 GPU PEIR, new legislation has been adopted in the state of California that set new long-term reduction targets for the state (i.e., Senate Bill [SB] 32 and AB 1279). Therefore, Issue 1 has been updated to reflect the state's newest long-term reduction goals mandated by SB 32 and AB 1279. Issue 2 has also been updated to reflect the new reduction goals of AB 1279, consistent with the 2022 Scoping Plan.

[2]The 2011 GPU PEIR (Issue 2) evaluated the potential effects of global climate change on the General Plan; however, in 2015, the California Supreme Court issued its decision in the California Building Industry Association v. Bay Area Air Quality Management District 62 Cal.4th (2015), indicating that according to CEQA statute, projects are not required to analyze the effect of the environment on a project, unless a project's incremental contribution of environmental impacts would exacerbate an existing adverse environmental condition. Given that the purpose of the CAP Update is to reduce GHG emissions within the county, no separate CEQA analysis of the change in effects of climate change on the General Plan due to CAP Update implementation is necessary.

Source: Compiled by Ascent Environmental in 2023.

Comments received during the Notice of Preparation (NOP) scoping process regarding environmental impacts and potential alternatives and mitigation measures included the following: reduce or eliminate natural gas from new development, increase solid waste diversion and recycling, implement building electrification, incorporate green building materials and retrofits, increase renewable energy (wind, solar) use and generation, allow Community Choice Aggregation, support the use of carbon offsets and develop an alternative to provide for their continued use for existing and future projects within the county, utilize and protect natural habitats and ecosystems for use as carbon sinks, purchase undeveloped lands around the region and convert to preserve lands (Fanita Ranch, Harvest Hills, Lilac Hills, Newland Sierra, Otay Ranch Villages, Rancho Guejito), utilize agriculture as a carbon sink, utilize urban vegetation as carbon sink, and urban cooling.

This input is addressed in this section, in the alternatives chapter, and throughout the CAP Update. Copies of the NOP and comment letters received in response to the NOP are included in Appendix A of this ~~draft~~ SEIR.

2.8.1 Existing Conditions

A discussion of global climate change and its effects is included in Section 2.17.1, "Existing Conditions," of the 2011 GPU PEIR and is incorporated by reference. This section includes updates to existing conditions since the adoption of the 2011 GPU PEIR that are relevant to the proposed project.

2.8.1.1 Greenhouse Gas Emissions

Physical Scientific Basis of Greenhouse Gas and Climate Change

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is substantial. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Greenhouse Gas Emission Sources

State

Emissions of GHGs are attributable in large part to human activities. The total GHG inventory for California in 2020 was 369 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) (CARB 2022a) This is less than the California Air Resources Board's (CARB's) AB 32 target to reduce emissions to 1990 levels by 2020 equal to 431 $MMTCO_2e$ (CARB 2020). Table 2.8-2, presented at the end of this section, summarizes the statewide GHG inventory for California.

As shown in Table 2.8-2, the sectors that contribute the most GHG emissions are transportation and industrial processes.

County of San Diego

The 2011 GPU PEIR included a baseline GHG emissions inventory for County operations and the unincorporated area for 2006. The CAP Update includes an emissions inventory for the year 2019 to characterize existing conditions. Inventory methods and data collection tools have evolved since the 2011 GPU PEIR and the 2019 inventory provides a current snapshot of emissions in the county.

Table 2.8-3, presented at the end of this section, shows that, in 2019, a total of 2,984,000 $MMTCO_2e$ were generated by activities in the unincorporated county and from County government operations. The largest contributor of GHG emissions was on-road transportation, which includes emissions from gasoline and diesel fuel use from vehicles operating on roadways. The second largest contributor was electricity consumption, which accounts for electricity generated from non-renewable sources and consumed at buildings and facilities.

2.8.2 Regulatory Framework

2.8.2.1 Federal

Energy Policy and Conservation Act

In 1975, Congress enacted the federal Energy Policy and Conservation Act, which established fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. As of 2022, the Corporate Average Fuel Economy standards require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026. The new standards will increase fuel efficiency 8 percent annually for model years 2024-2025 and 10 percent annually for model year 2026. They will also increase the estimated fleetwide average by nearly 10 miles per gallon for model year 2026, relative to model year 2021 (DOT 2022).

Massachusetts vs. EPA

On April 2, 2007, in *Massachusetts v. EPA*, the Supreme Court directed the US Environmental Protection Agency (EPA) administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the federal Clean Air Act (CAA). On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the CAA:

- The administrator found that elevated concentrations of GHGs—carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, methane, nitrous oxide, and hydrofluorocarbons—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

2.8.2.2 State

Statewide GHG Emission Targets and Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades. GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (SB 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. This target was superseded by AB 1279 which codifies a goal for carbon neutrality and reduced emissions to 85 percent below 1990 levels by no later than 2045. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015).

On September 16, 2022, Governor Newsom signed AB 1279 which codified stringent emissions targets for the state of achieving carbon neutrality and an 85 percent reduction in 1990 emissions level by 2045. CARB released the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) on November 16, 2022, as also directed by AB 1279 (CARB 2022b). The 2022 Scoping Plan traces the pathway for the state to achieve its carbon neutrality and a goal of 85 percent reduction below 1990 emissions levels by 2045 using several scenarios that utilized difference suites of technologies and deployment of various regulations. CARB adopted the 2022 Scoping Plan on December 16, 2022.

Senate Bill 375 of 2008

In September 2008, SB 375 was signed into law and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB provides each affected region with reduction targets for GHGs emitted by passenger cars

and light trucks for 2020 and 2035. The San Diego Association of Governments' (SANDAG's) *San Diego Forward: The Regional Plan* (2021 Regional Plan) is a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) that combines and updates two previous plans (the Regional Comprehensive Plan and the RTP/SCS) into one document that looks toward 2050. The 2021 Regional Plan reduces per capita GHG emissions from cars and light-duty trucks to 20 percent below 2005 levels by 2035, exceeding the region's state-mandated target of 19 percent. The 2021 Regional Plan also meets federal air quality conformity requirements. SANDAG submitted the final 2021 RTP/SCS to CARB on December 17, 2021, as required by California Government Code Section 65080(b)(2)(J)(ii) and completed its submittal of supporting information on March 16, 2022. CARB staff performed an evaluation of the 2021 RTP/SCS's quantification of the GHG emissions reduction strategies outlined in the 2021 Regional Plan. The technical analysis performed by CARB concluded that the 2021 Regional Plan would achieve the applicable GHG emissions reduction target for automobiles and light trucks of 19 percent per capita reduction by 2035, relative to 2005 levels, as established by CARB for the region (CARB 2022c). The final determination to approve the 2021 Regional Plan was made by CARB on August 26, 2022.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles (ZEVs), into a single package of regulatory standards for vehicle model years 2017–2025. The new regulations strengthened the GHG standards for 2017 models and beyond. In addition, the program's ZEV regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025. In August 2022, CARB adopted the Advanced Clean Cars II program, which sets sales requirements for ZEVs to ultimately reach the goal of 100 percent ZEV sales in the state by 2035.

California Renewables Portfolio Standard

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB 100 of 2018 sets a three-stage compliance period requiring all California utilities, including independently owned utilities, energy service providers, and community choice aggregators, to generate 52 percent of their electricity from renewables by December 31, 2027; 60 percent by December 31, 2030; and 100 percent carbon-free electricity by December 31, 2045. On September 16, 2022, the state passed SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022, which revised state policy and requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Building Energy Efficiency Standards

Title 24, Part 6

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Commission updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The current California Energy Code will require builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use. The core focus of the building standards has been efficiency, but the 2019 Energy Code ventured into onsite generation by requiring photovoltaic (PV) on new homes, providing significant GHG savings. The most recent is the 2022 California Energy Code which advances the onsite energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar PV system and battery storage standards, and strengthening ventilation standards to improve indoor air quality. The California Energy Commission estimates that the 2022 California Energy Code will save consumers $1.5 billion and reduce GHG emissions by 10 $MMTCO_2e$ over the next 30 years (CEC 2021).

Title 24, Part 11

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The current version is the 2022 CALGreen Code, which took effect on January 1, 2023. As compared to the 2019 CALGreen Code, the 2022 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and used as guidelines by state agencies for meeting the requirements of EO B-18-12.

Low Carbon Fuel Standard

In January 2007, EO S-1-07 established a Low Carbon Fuel Standard (LCFS). The EO calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 and for an LCFS for transportation fuels to be established for California. The LCFS applies to all refiners, blenders, producers, or importers (providers) of transportation fuels in California, including fuels used by off-road construction equipment (Wade, pers. comm., 2017). The LCFS is measured on the total fuel cycle and may be met through market-based methods. For example, providers exceeding the performance required by an LCFS receive credits that may be applied to future obligations or traded to providers not meeting the LCFS.

In June 2007, CARB adopted the LCFS as a Discrete Early Action item under AB 32 pursuant to Health and Safety Code Section 38560.5, and in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity than the established baseline (or obtained from another party) is equal to or greater than the "deficits" earned from selling higher-intensity fuels. After some disputes in the courts, CARB readopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. CARB is currently amending the LCFS regulation with intent to adopt the amendments in 2023.

EO B-48-18: Zero-Emission Vehicles

In January 2018, EO B-48-18 was signed into law and requires all state entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 EV charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This EO also requires all state entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a *Plug-in Charging Station Design Guidebook* and update the *Hydrogen Station Permitting Guidebook* to aid in these efforts (Eckerle and Jones 2020). All state entities are required to participate in updating the *2018 Zero-Emissions Vehicle Action Plan* intended to provide direction to state agencies on the most important actions to be executed in 2018 to enable progress toward the 2025 targets and 2030 vision, give stakeholders transparency into the actions state agencies plan to take (or are taking) to further the ZEV market, and create a platform for stakeholder engagement, feedback, and collaboration. Additionally, all state entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS program, and to recommend how to ensure affordability and accessibility for all drivers.

California 2030 Natural and Working Lands Climate Change Implementation Plan

CARB and other state agencies also released the January 2019 Draft California 2030 Natural and Working Lands Climate Change Implementation Plan (CA 2030 NWL Climate Change Implementation Plan) consistent with the carbon neutrality goal of EO B-55-18. The CA 2030 NWL Climate Change Implementation Plan outlines climate objectives for natural and working lands: to maintain them as a resilient carbon sink (i.e., net zero or negative GHG emissions) and set a preliminary goal to reduce GHG emissions from them by at least 15–20 $MMTCO_2e$ by 2030. The plan is projected to result in cumulative emissions of 12.4 to 35.9 $MMTCO_2e$ by 2030 and cumulative emission reductions of -84.2 to -83.1 $MMTCO_2e$ by 2045 (California Environmental Protection Agency et al. 2019).

2.8.2.3 Local

San Diego County Air Pollution Control District

The San Diego County Air Pollution Control District (SDAPCD) has jurisdiction over air quality programs in the county. SDAPCD regulates most air pollutant sources, except for mobile sources, which are regulated by CARB or EPA. State and local government projects, as well as projects proposed by the private sector are subject to SDAPCD requirements if the sources are regulated by SDAPCD. The Scoping Plan does not provide an explicit role for local air districts in implementing AB 32, but it does state that CARB will work actively with air districts in coordinating emissions reporting, encouraging, and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, as well as through their role as a CEQA lead or responsible agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. SDAPCD is responsible for air quality planning in San Diego County. To date, SDAPCD has not developed specific thresholds of significance with regard to the evaluation of GHG emissions in CEQA documents.

San Diego Association of Governments' San Diego Forward: The Regional Plan 2021

The 2021 Regional Plan covers a broad range of topics including air quality, borders and tribal nations, climate change, economic prosperity, emerging technologies, transit and automobile energy efficiency, and fuels, habitat preservation, community health, public facilities, shoreline preservation, transportation, and water quality. The Regional Plan emphasizes the importance of multimodal transportation and places special emphasis on active transportation, such as walking and biking, and reducing car use to minimize GHG emissions, diminish air pollution, and maximize public health. The 2021 Regional Plan also includes an SCS, which identifies five main strategies to complement the goal of sustainability. These strategies focus on job growth and housing in urbanized areas with existing public transportation options, addressing housing needs for all economic segments of the population, the preservation of open space, investment in an accessible transit network, and reduced GHG emissions through the implementation of actions such as increasing public transportation infrastructure and access, encouraging active transportation through upgrades to pedestrian and bike facilities, and incentivizing EV use and providing additional EV infrastructure. The 2021 Regional Plan is designed to be updated every 4 years in accordance with federal law in collaboration with the 18 cities and San Diego County along with regional, state, and federal partners. The 2021 Regional Plan focuses on regional targets through 2050. The 2021 Regional Plan is projected to reduce per capita GHG emissions from cars and light-duty trucks to 20 percent below 2005 levels by 2035, exceeding the region's state-mandated target of 19 percent. The 2021 Regional Plan also meets federal air quality conformity requirements. The goals outlined in the 2021 Regional Plan are as follows:

- the efficient movement of people and goods;
- access to affordable, reliable, and safe mobility; and
- healthier air and reduced GHG emissions.

2011 San Diego County General Plan

The General Plan policies related to GHG emissions that could be applicable to the CAP Update include the following:

Policy COS-14.1: Land Use Development Form. Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.

Policy COS-14.2: Villages and Rural Villages. Incorporate a mixture of uses within Villages and Rural Villages that encourage people to walk, bicycle, or use public transit to reduce air pollution and GHG emissions.

Policy COS-14.7: Alternative Energy Sources for Development Projects. Encourage development projects that use energy recovery, photovoltaic, and wind energy.

Policy COS-14.8: Minimize Air Pollution. Minimize land use conflicts that expose people to significant amounts of air pollutants.

Policy COS-14.9: Significant Producers of Air Pollutants. Require projects that generate potentially significant levels of air pollutants and/or GHGs such as quarries, landfill operations, or large land development projects to incorporate renewable energy, and the best available control technologies and practices into the project design.

Policy COS-14.10: Low-Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low-emission construction vehicles and equipment to improve air quality and reduce GHG emissions.

Policy COS-15.1: Design and Construction of New Buildings. Require that new buildings be designed and constructed in accordance with "green building" programs that incorporate techniques and materials that maximize energy efficiency, incorporate the use of sustainable resources and recycled materials, and reduce emissions of GHGs and toxic air contaminants.

Policy COS-15.3: Green Building Programs. Require all new County facilities and the renovation and expansion of existing County buildings to meet identified "green building" programs that demonstrate energy efficiency, energy conservation, and renewable technologies.

Policy COS-15.4: Title 24 Energy Standards. Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards.

Policy COS-15.5: Energy Efficiency Audits. Encourage energy conservation and efficiency in existing development through energy efficiency audits and adoption of energy saving measures resulting from the audits.

Policy COS-15.6: Design and Construction Methods. Require development design and construction methods to minimize impacts to air quality.

Policy COS-16.2: Single-Occupancy Vehicles. Support transportation management programs that reduce the use of single-occupancy vehicles.

Policy COS-16.3: Low-Emissions Vehicles and Equipment. Require County operations and encourage private development to provide incentives (such as priority parking) for the use of low- and zero-emission vehicles and equipment to improve air quality and reduce GHG emissions. [Refer also to Policy M-9.3 (Preferred Parking) in the Mobility Element.]

Policy COS-18.2: Energy Generation from Waste. Encourage use of methane sequestration and other sustainable strategies to produce energy and/or reduce GHG emissions from waste disposal or management sites.

Policy COS-18.3: Alternate Energy Systems Impacts. Require alternative energy system operators to properly design and maintain these systems to minimize adverse impacts to the environment.

*[1]Policy COS-20.1: Climate Change Action Plan. Prepare, maintain, and implement a climate change action plan with a baseline inventory of GHG emissions from all sources; GHG emissions reduction targets and deadlines, and enforceable GHG emissions reduction measures.

Policy COS-20.3: Regional Collaboration. Coordinate air quality planning efforts with federal and state agencies, San Diego Association of Governments (SANDAG), and other jurisdictions.

Green Building Incentive Program

The County of San Diego's Green Building Incentive Program is designed to promote the use of resource efficient construction materials, water conservation, and energy efficiency in new and remodeled residential and commercial buildings. The program offers incentives of reduced plan check turnaround time and a 7.5 percent reduction in plan check and building permit fees for projects meeting program requirements.

Construction and Demolition Recycling Ordinance

The Construction and Demolition Debris Ordinance is designed to divert debris from construction and demolition projects from the landfill disposal in the unincorporated county. The ordinance requires that 90 percent of inserts (i.e., asphalt, concrete, brick, masonry, tile, and dirt) and 70 percent of all other construction materials from a project be recycled. To comply with the ordinance, a Construction and Demolition Debris

[1] The policy and mitigation measures denoted with an asterisk are amended for consistency with the General Plan as part of the CAP Update project. The policy and mitigation measures are shown here in their current form, not as amended by the project.

Management Plan must be submitted, and a fully refundable Performance Guarantee must be paid prior to building permit issuance.

Strategic Plan to Reduce Waste

The County of San Diego Strategic Plan to Reduce Waste is designed to reduce waste sent to landfills. The plan includes 15 programs and policies that focus on different waste types and sources, such as reducing food and other organic waste generated from residential and commercial uses and sets a 75 percent waste diversion target by 2025.

Landscape Ordinance

The County of San Diego's Landscaping Ordinance was adopted in accordance with the state's Model Water Efficient Landscape Ordinance, which establishes water efficiency standards for new and existing landscapes. The County's ordinance applies to new construction for which the County issues a building permit or a discretionary review where the aggregate landscaped area is 500 square feet or more to obtain outdoor water use authorization. For those projects between 500 and 2,500 square feet, the County has a more streamlined process called the Prescriptive Compliance Option. All landscape areas are subject to a Maximum Applied Water Allowance, which sets an upper limit of allowable water use per landscape area.

County Operations Strategic Sustainability Plan

The County's 2020–2030 County Operations Strategic Sustainability Plan (Strategic Plan) supersedes the previously implemented 2015 Strategic Energy Plan. The Strategic Plan sets goals to promote sustainability in four key sectors of County operations: energy, water, waste, and transportation. The goals outlined in the Strategic Plan relating to GHG emissions are as follows:

- reduce energy use and GHG emissions,
- promote clean energy production,
- provide sound facility energy management,
- achieve cost savings,
- reduce fleet vehicle miles traveled (VMT),
- eliminate underutilized vehicles to decrease size of fleet,
- electrify the fleet where possible, and
- expand EV charging infrastructure on County sites for both public and fleet.

The Strategic Plan is intended to consolidate the sustainability planning efforts of other County planning documents under a single County operations purpose (i.e., mission statement).

2.8.3 Analysis of Effects and Significance Determinations

2.8.3.1 Significance Criteria

State CEQA Guidelines Section 15064 and relevant checklist questions contained in Appendix G recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Under Appendix G of the State CEQA Guidelines, implementing the project would result in a cumulatively considerable contribution to climate change if it would:

- generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
- conflict with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

The 2011 GPU PEIR evaluated the General Plan's compliance with AB 32; however, since the certification of the 2011 GPU PEIR, new legislation has been adopted in the state of California that set new long-term reduction targets for the state (i.e., SB 32 and AB 1279). Therefore, Issue 1: Compliance with AB 32, has been updated to reflect the state's newest long-term reduction goals mandated by SB 32 and AB 1279. The 2022 Scoping Plan contains language that indicates that the initial goal of SB 32 (i.e., reducing 1990 emissions by 40 percent by 2030) would likely need to be revised to meeting a 48 percent reduction in 1990 emission levels by 2030 to meet the ultimate goals of AB 1279 (i.e., reducing 1990 emissions by 85 percent by 2045 and achieve carbon neutrality by no later than 2045. While not codified by formal legislation, this reduction target is notable and considered in the evaluation of the CAP Update. This is evaluated in Issue 2. Issue 1 of this analysis details whether the proposed CAP Update would generate emissions of GHGs, either directly or indirectly, that may have a significant impact on the environment.

Additionally, the 2011 GPU PEIR evaluated the potential effects of global climate change on the General Plan; however, in 2015, the California Supreme Court issued its decision in the *California Building Industry Association v. Bay Area Air Quality Management District* 62 Cal.4th (2015), indicating that according to CEQA statute, projects are not required to analyze the effect of the environment on a project, unless a project's incremental contribution of environmental impacts would exacerbate an existing adverse environmental condition. Given that the purpose of the CAP Update is to reduce GHG emissions within the county, no separate CEQA analysis of the change in effects of climate change on the General Plan due to CAP Update implementation is necessary.

2.8.3.2 Approach to Analysis

Impacts related to GHG emissions are analyzed qualitatively based on a review of the CAP Update measures and actions and their potential to result in physical changes to the environment if the CAP Update is approved and implemented. Each issue area is analyzed in the context of existing laws and regulations as well as policies adopted in the General Plan, and the extent to which these existing regulations and policies adequately

address and minimize the potential for impacts associated with implementation of the CAP Update. Because this SEIR tiers from the 2011 GPU PEIR, all relevant 2011 GPU PEIR mitigation measures are applicable to the proposed project as needed (i.e., upon the determination that an impact is significant) to avoid or minimize project impacts and are considered part of the proposed CAP Update.

Scope of SEIR Impact Analysis

The impact analysis contained within this ~~draft~~ SEIR focuses on whether implementation of the CAP Update would result in new or more severe impacts than were disclosed in the 2011 GPU PEIR, which is herein incorporated by reference. The CAP Update identifies strategies, measures, and actions (referred to herein as measures and actions) to demonstrate progress toward the 2030 and 2045 GHG reduction targets. The measures also include supporting actions intended to put the County on a path to the long-term goal of net zero emissions. Because these measures and actions represent the components of the CAP Update that could result in physical environmental effects within the unincorporated county, this analysis focuses on the impacts of their implementation. Given the broad scope of the CAP Update (i.e., covering the entire unicorporated county and County government operations) and its role as a programmatic planning document designed to guide future decision-making related to the reduction of GHG emissions within the unincorporated county and from County government operations, the study area for this analysis is the unincorporated area of the county within the County's jurisdiction (i.e., all unincorporated lands excluding tribal lands, state and federally owned lands, and military installations).

The analysis in this ~~draft~~ SEIR is programmatic. Implementation of all CAP Update measures and actions were considered during preparation of this ~~draft~~ SEIR, to the degree specific information about their implementation is known. Because future projects consistent with the CAP Update have yet to be specifically defined, this SEIR considers the types of impacts that could occur with implementation of future projects consistent with the proposed GHG reduction measures and actions. Future discretionary projects would be required to be evaluated to determine if they are within the scope of this SEIR or if they result in project-specific impacts additional to what is concluded in this analysis. If additional impacts would result, additional CEQA documentation would be required to evaluate impacts, determine mitigation, and conclude whether impacts are reduced to below a significant impact.

Proposed CAP Update Measures

As described in Chapter 1, "Project Description," the overarching strategies and associated measures and actions, proposed in the CAP Update (see Table 1-2) have been grouped into categories for the purpose of analysis, based on the sector they target (e.g., solid waste, water/wastewater). CAP Update measures and actions that would have the potential to affect GHG emissions are summarized below. CAP Update actions and measures that would not involve development of policies and programs that would not result in direct physical effects or those that would result in limited physical improvements to existing development are not discussed further because these actions

and measures would not have potential to result in new or more severe impacts related to climate change.

The County's 2019 GHG emissions inventory is summarized in Table 2.8-3. GHG emissions reductions associated with CAP Update strategies are summarized in Table 2.8-4. A summary of reductions relative to the CAP Update targets is provided in Table 2.8-5. Note that emissions reductions are presented for the milestone years of 2030 and 2045 as they represent the years for which codified statewide targets have been set (i.e., a 40 and 85 percent reduction from a statewide 1990 GHG inventory by 2030 and 2045, respectively). Emissions and reductions for interim years discussed in the CAP (2035 and 2040) are presented in the CAP Update

Solid Waste Measures and Actions. This category includes strategies, measures, and implementing actions aimed at achieving zero solid waste in County operations and within the unincorporated county. Key measures and actions with potential to result in new or more severe impacts related to GHG emissions include Actions SW-1.1, SW-4.1.a, and SW-4.1.b, which could generate emissions from the construction of new waste handling and recycling facilities as well as performing upgrades to existing facilities.

Water and Wastewater Measures and Actions. This category includes strategies to reduce water consumption and increase wastewater and stormwater treatments. Key measures and actions with potential to result in new or more severe impacts related to GHG emissions include Actions W-2.2 and W-2.3, which would involve the installation of stormwater and greywater capture systems, as well as Action W-1.1, which would involve water-efficiency measures in new and existing County buildings.

Agriculture and Conservation Measures and Actions. This category includes strategies to preserve natural land and agricultural land. Key actions with potential to result in new or more severe impacts related to GHG emissions include Action A-4.1.b, which would evaluate opportunities for increased farmworker housing; Action A-4.1, which would involve habitat restoration; and Actions A-2.1 and A-2.2, which would involve the delivery and planting of trees.

Energy Measures and Actions. This category includes strategies to develop policies and programs to increase energy efficiency and renewable energy use. Key actions with potential to result in new or more severe impacts related to GHG emissions include Actions E-1.1, E-2.2, E-2.2.d, E-3.2, and E-3.3, which could result in the installation of new small-scale rooftop wind turbines and solar panels. Action E-3.3 would require the County to develop a program to provide the unincorporated area with 100 percent renewable energy from San Diego Community Power by 2030. This action may indirectly result in the construction of large-scale renewable energy infrastructure.

Built Environment and Transportation Measures and Actions. This category includes strategies to decarbonize the vehicle fleet, install EV charging stations, incentivize the use of alternative fuels and landscaping practices, and to promote and support transit and ridesharing to reduce single-occupancy vehicle use. Key actions with potential to result in new or more severe impacts related to GHG emissions include Actions T-3.1 and T-

3.1.a, which would support new hydrogen fueling infrastructure and installation of EV charging stations, as well as Action T-5.1 which would result in the implementation of transit-supportive roadway treatments and bicycle and pedestrian infrastructure.

2.8.3.3 Issue 1: Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

Guidelines for Determination of Significance

Based on Appendix G of the State CEQA Guidelines, which was revised in 2018, after certification of the 2011 GPU PEIR, the project would have an impact if it would:

- generate GHG emissions that may have a significant impact on the environment.

The *County of San Diego Guidelines for Determining Significance: Climate Change* (County of San Diego 2018) contains guidance for evaluating project impacts related to climate change within the county. However, the guidance within the document pertaining to climate change is based on a previous CAP that was rescinded following litigation. For this reason, the guidelines pertaining to climate change in the *County of San Diego Guidelines for Determining Significance: Climate Change* are not used in this analysis. The CAP Update includes revised Guidelines for Determining Significance and a new GHG threshold to make these items consistent with new state legislation. Therefore, Appendix G is used to analyze impacts from the project on GHG emissions.

Impact Analysis

2011 GPU PEIR Determination

The 2011 GPU PEIR evaluated the potential effects of the General Plan related to consistency with the goals and strategies of AB 32, as well as the effects of global climate change on the General Plan, on pages 2.17-12 through 2.17-27. This analysis is incorporated herein by reference. The 2011 GPU PEIR projected that the General Plan would have a potentially significant impact related to compliance with AB 32 because GHG emissions were projected to increase to 7.1 $MMTCO_2e$ (from 5.3 $MMTCO_2e$ in 1990) by 2020 without incorporation of any GHG-reducing policies or mitigation measures. This amount represents an increase of 24 percent over 2006 levels, and a 36 percent increase from estimated 1990 levels. General Plan policies and mitigation measures in addition to compliance with applicable regulations such as the CAA, Lieberman-Warner Climate Security Act, CARB standards, Title 24 standards, EO S-3-05, AB 32, EO S-01-07, SB 97, SB 1368, SB 1078, SDAPCD standards and existing County programs and policies, would mitigate the potential impacts of global climate change to a less-than-significant level. The analysis in Chapter 2.17 of the 2011 GPU PEIR on pages 2.17-12 through 2.17-33 is incorporated by reference.

CAP Update Impact Analysis

The following section analyzes impacts related to GHG emissions that would result from the implementation of the measures and actions in the CAP Update.[2]

Solid Waste Measures and Actions

Implementation of the measures and actions within this group may result in the expansion of solid waste diversion/recycling programs/incentives and the collection of landfill gas at existing landfills. Emissions of GHGs would occur from the construction of new waste handling and recycling facilities, as well as performing upgrades to existing facilities (Actions SW-1.1, SW-4.1.a, and SW-4.1.b). Emissions of GHGs would occur from construction activities including operation of heavy-duty equipment, vehicle travel by worker commute trips, material delivery, and haul trips. Construction activities would primarily consist of short-term activities such as grading and clearing land and construction of new structures, as well as upgrades to existing ones. Construction activities would occur for relatively short periods of time. These types of construction activities do not typically generate substantial GHG emissions and would be considered short-term GHG emitting investments to facilitate achieving the reduction targets of the CAP Update.

Regarding the operation of new waste handling and recycling facilities, measures and actions in the solid waste group are intended to increase recycling, divert waste from landfills, and increase landfill gas capture rates at landfills. For example, Action SW-3.1 aims to expand landfill gas systems to increase fugitive gas capture by 5 percent at County-owned landfills to decrease fugitive emissions beyond state requirements. Through Action SW-4.1, the County would conduct a feasibility study and implement a landfill gas system pilot project at privately managed landfills to exceed state requirements. Both of these measures would reduce emissions of methane (a GHG emitted during the anaerobic decomposition of waste) in the county by capturing the gas before it is released into the atmosphere. Implementation of Action SW-2.1 would update the County's Strategic Plan to Reduce Waste to include strategies to achieve zero waste (90 percent diversion) by 2045. This would reduce GHG emissions by diverting waste from landfills where it would otherwise decompose and emit methane into the atmosphere. Increases in waste diversion could lead to increased haul truck trips, and associated GHG emissions, to and from composting and recycling facilities. However, it is anticipated that these trips would displace the haul truck trips that would be diverted from the landfill. Therefore, a net increase in the number of haul truck trips and associated GHG emissions within the county would not be anticipated.

These measures and actions would collectively reduce GHG emissions generated within the county by diverting waste from landfills, increasing recycling, and increasing landfill gas capture at landfills. Because these measures collectively reduce the amount of GHG

[2] This analysis does not address the global impacts of climate change on the project in the way that the GPU Update PEIR addressed such impacts on the General Plan given the 2015 publication of the California Building Industry Association v. Bay Area Air Quality Management District opinion in which the California Supreme Court ruled that the California Environmental Quality Act (CEQA) does not generally require consideration of the effects of existing environmental conditions on a proposed project's future users or residents, but that CEQA does mandate analysis of how a project may exacerbate existing environmental hazards.

emissions that would occur from waste handling, it can be assumed that any temporary GHG emissions during implementation of these measures would be offset by the overall net benefit of GHG emissions reductions that would result from implementation of the measures that comprise the solid waste group. The strategies, measures, and actions of the CAP Update are estimated to reduce emissions in exceedance of the targets. Any marginal and temporary increase in emissions is not anticipated to interfere with the ability of the CAP Update to achieve established targets. Therefore, implementation of the measures within the group would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

The CAP Update measures and actions are consistent with General Plan policies that were evaluated in the 2011 GPU PEIR. For example, General Plan Policy COS-14.9 requires that projects that generate potentially significant levels of air pollutants and/or GHGs such as landfill operations incorporate renewable energy; while Policy COS-18.2 encourages the use of methane sequestration and other sustainable strategies to produce energy and/or reduce GHG emissions from waste disposal or management sites. Therefore, operational emissions from these facilities would generally be within the scope of expected development analyzed in the 2011 GPU PEIR. The impact would be less than significant.

Water and Wastewater Measures and Actions

Implementation of measures and actions within the water and wastewater groups would increase water efficiency and conservation. Implementation of the measures and actions may result in new building requirements, building retrofits, and water efficiency programs. GHG emissions from water and wastewater facilities and upgrades would occur from construction activities including operation of heavy-duty equipment, vehicle travel by worker commute trips, material delivery, and haul trips. Construction activities would primarily consist of grading and clearing land, construction of small structures, and the installation of new pipelines or additions to existing pipelines. Operation of these facilities and structures would generate GHG emissions from maintenance trips, worker commute trips, and the use of electricity to power pumps and treatment facilities. However, operation of these facilities does not typically require a substantial number of employees and maintenance trips along pipelines are typically infrequent and last for short periods of time. Further, Actions W-2.1 and W-2.4 would improve water efficiency, and therefore reduce electricity use, by reducing outdoor water use for landscaping purposes for new development and by reducing potable water consumption by 23 percent for existing and new County buildings and by 20 percent for existing and new development in the unincorporated county by incentivizing water efficiency and conservation.

Because these measures collectively reduce the amount of GHG emissions that would occur from water/wastewater treatment and transportation within the county, it can be assumed that any temporary GHG emissions during implementation of these measures would be offset by the overall net benefit of GHG emissions reductions that would result from implementation of the measures that comprise the water and wastewater group. Therefore, implementation of the measures within the group would generate GHG emissions that would have a less-than-significant impact on the environment.

Agriculture and Conservation Measures and Actions

Implementation of measures and actions within the agriculture and conservation group would result in the acquisition and preservation of natural lands (Actions A-1.1 and A-1.2), as well as improve land management practices to protect habitat and increase carbon storage (Action A-1.2.a). Additionally, measures and actions in the group aim to reduce GHG emissions from agricultural operations (Measure A-5), increase tree planting (Measure A-2), and create additional housing for farmers (Action A-4.1.b). Projects that could result from implementation of these measures and actions could include but would not be limited to: preservation of agricultural lands, carbon farming, natural/working lands restoration, on-farm anaerobic digesters, incentivizing manure composting, reducing agricultural water costs, carbon farming programs, open space/habitat restoration plans, tree planting, incentivizing transition to cleaner (e.g., renewable diesel and electric) agricultural equipment, and increasing farmworker housing.

Some measures and actions within this group could involve some type of ground disturbing construction activity and would generate GHG emissions. For example, Action A-4.1.b would evaluate opportunities for increased farmworker housing, which could involve the subsequent construction of housing for farmworkers. GHG emissions from construction activities would result primarily from use of heavy-duty equipment, worker commute trips, vendor truck trips, and haul trips. Additionally, Actions T-2.1 and T-2.2 would promote the use of alternative fuel in construction equipment and would therefore reduce GHG emissions resulting from the combustion of fossil fuel related to construction activities. Additionally, GHG emissions would occur from the combustion of fossil fuels which would occur during the delivery and planting of trees as stated in Action A-2.1, as well as from habitat restoration activities included in Action A-2.1.

Regarding operations, actions which involve tree planting, as described above, would not reduce GHG emissions but would instead aid in the removal of GHG emissions from the atmosphere through carbon sequestration. Additionally, these measures could reduce electricity demand associated with the use of air conditioning by providing shade as well as reduce water demand for watering as compared to current baseline watering usage without implementation of the CAP Update measures, as it is assumed that new trees would be drought tolerant. Action A-4.1 would involve the development of a ~~Carbon Farming~~ Climate Smart Land Stewardship Program to increase carbon sequestration on 3,000 acres of land by 2030 and 36,214 acres of land by 2045. By 2030, Action A-5.1 would reduce GHG emissions associated with agricultural operations in the area by 3 percent by developing a program to incentivize a transition to cleaner fuels (e.g., renewable diesel, electric equipment) and the efficient use of energy and water (e.g., LED grow lights and water re-use). See Tables 2.8-4 and 2.8-5 for a summary of GHG reductions and a comparison to the GHG reduction targets Lastly, Actions A-4.1.a and A-4.1.b would reduce GHG emissions from vehicle trips by developing a food sourcing policy to prioritize local food suppliers and identifying opportunities for farmer housing to reduce trip lengths for farmers, respectively.

Implementation of the GHG reduction measures and their associated actions which comprise the agriculture and conservation group would collectively reduce GHG

emissions generated within the county by incentivizing the transition to cleaner fuels, promoting the efficient use of energy and water, reducing the need for cooling through the planting of trees in residential areas, and reducing VMT associated with food delivery and farm worker commute trips. Lastly, Actions A-1.2, A-1.2.a, and A-4.1 would increase carbon sequestration through the restoration of natural land and the development of a ~~Carbon Farming~~ Climate Smart Land Stewardship Program, thus removing existing CO_2 emissions from the atmosphere. Some emissions of GHGs could occur from the treatment and transportation of water used to irrigate the new trees. Because these measures collectively reduce the amount of GHG emissions that would occur from agricultural operations within the county, as well as remove GHG emissions from the atmosphere, it can be assumed that any operations- or construction-related GHG emissions would be offset by the overall net benefit of agriculture-related GHG emissions reductions that would result from implementation of the measures that comprise the agriculture and conservation group. Therefore, implementation of the measures within the agriculture and conservation group would generate GHG emissions that would have a less-than-significant impact on the environment.

Energy Measures and Actions

Implementation of measures and actions within the energy group would increase building energy efficiency, develop renewable energy generation infrastructure, and increase electrification in the unincorporated county. Some of these measures and their associated actions would result in investments in local job training, incentive programs and amendments to County codes regarding energy, among other initiatives. Other measures and actions could result in large-scale wind turbines and solar arrays, as well as energy-storage systems. Additional actions include energy efficiency retrofits on existing residential and non-residential structures, including rooftop or ground-mounted solar PV arrays or small wind turbines, grid infrastructure improvements, upgraded mechanical systems, and other similar improvements. Implementation of these measures and their associated actions would generally involve some type of ground disturbing construction activity.

Implementation of measures which could result in the installation of new large- and small-scale rooftop wind turbines and solar panels (Actions E-1.1, E-2.2, and E-3.3) would produce emissions of GHGs during construction. GHG emissions from construction activities would result from use of heavy-duty equipment, fugitive dust from earth moving and grading activities, worker commute trips, vendor truck trips, and haul trips. Construction activities may include grading and clearing but generally would not include construction of new buildings or structures. Construction activities related to small-scale renewables infrastructure would likely be relatively small in scale, occur intermittently, and last for only short periods of time.

Large-scale renewable energy infrastructure would generally be constructed in undeveloped locations that are productive for generating renewable energy. Because the amount of demand generated by such a program and the mix of renewable energy types that would be constructed to satisfy demand is unknown, this ~~draft~~ SEIR evaluates the potential for impacts at the program level. Future discretionary projects would be required

to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts related to GHG emissions to the extent feasible in compliance with State CEQA Guidelines Section 15126.4.

The large-scale production of energy from solar PV systems generally includes a variety of infrastructure components such as arrays, substation site, battery storage, collection system, and overhead and underground transmission facilities. Large-scale wind turbines infrastructure generally includes wind turbines (300–500 feet to the topmost blade tip), substation, meteorological towers, overhead and underground collector cable system, and overhead transmission lines. Emissions of GHGs could occur during construction of these systems. Emissions of GHGs from construction activities would primarily result from use of heavy-duty equipment, vendor truck trips, and haul trips. Construction activities may include grading and clearing but would not include construction of new buildings or structures. These activities would result in emissions of GHGs. The greatest potential for GHG emissions during construction would be emissions from diesel-powered construction equipment and heavy-duty truck trips (such as those used to transport renewable systems components).

Regarding operations, solar PV energy panels and small-scale wind turbines typically do not result in substantial activities related to operating the equipment, and include only minor maintenance activities, such as regular inspections, repairs, and removing debris as necessary. These activities could result in small amounts of GHG emissions from the combustion of fossil fuels used in maintenance vehicles.

Operation of large-scale renewable energy systems would not directly produce substantial GHG emissions because no large emission-generating equipment would be operated. Operation could result in the operation of stationary sources such as generators. While the sizes, scale, and location of renewable infrastructure is unknown, typical emissions associated with these facilities are low and occur infrequently such that substantial emission of GHGs during operation is not expected.

Action E-2.2 would reduce GHG emissions by decreasing operational energy consumption through amending the County's Code of Regulatory Ordinances to require Tier 2 CALGreen energy efficiency requirements for existing development projects. Action E-1.1 would reduce GHG emissions by implementing the County Facilities Zero Carbon Portfolio Plan to achieve 90 percent reduction in operational carbon emissions by 2030 through building electrification and zero net energy construction, energy efficiency, energy management, and renewable energy use and generation. On balance, measures and actions relating to the construction of large- and small-scale renewables infrastructure would reduce GHG emissions by reducing reliance on fossil fuels to generate electricity.

Implementation of the GHG reduction measures and their associated actions which comprise the energy group would collectively reduce GHG emissions generated within the county by implementing large- and small-scale renewable infrastructure, improving energy efficiency in new and existing buildings, incentivizing renewable energy use, and amending County codes and ordinances to improve energy efficiency and renewable

energy utilization. Because these measures collectively reduce the amount of GHG emissions that would occur as a result of the usage and generation of energy within the county, it can be assumed that any temporary GHG emissions during implementation of these measures would be offset by the by the overall net benefit of energy-related GHG emissions reductions that would result from implementation of the measures that comprise the energy group. Additionally, all projects resulting from the implementation of these measures would be subject to applicable adopted General Plan policies (see Section 2.8.2, "Regulatory Framework"). These policies would further reduce impacts associated with energy. For example, General Plan Policy COS-14.7 encourages development projects that use energy recovery, PV, and wind energy, while Policy COS-18.3 requires alternative energy system operators to properly design and maintain these systems to minimize adverse impacts to the environment. These policies would aid in reducing impacts related to energy by encouraging and incentivizing renewable energy use and generation, thus decreasing reliance on fossil fuels for energy generation and therefore reducing GHG emissions associated with the combustion of fossil fuels. The impact would be less than significant.

Built Environment and Transportation Measures and Actions

Implementation of measures and actions within the built environment and transportation group would encourage a shift towards alternative modes of transportation (, encourage alternative fuel use, and reduce single-occupancy vehicle trips. These measures and their associated actions would be implemented through activities such as constructing EV charging stations, implementing transit-supportive roadway treatments (e.g., transit signal priority, bus-only signal phases, queue jumps, curb extensions to speed passenger loading, and dedicated bus lanes), transportation demand management programs, improving roadways to encourage/expand multimodal transportation, incentivizing active transportation, and constructing new bicycle and pedestrian projects as well as improving existing ones. While locations for such improvements have not been identified, because of the nature of these improvements, these would most likely occur near residential and commercial centers throughout the unincorporated areas. The size, scale, and location of these improvements is unknown.

Implementation of actions that would result in new hydrogen fueling and EV charging stations (Actions T-3.1 and T-3.1.a), as well as the implementation of transit-supportive roadway treatments and bicycle and pedestrian infrastructure (Action T-5.1) that would generally involve some type of ground disturbing construction activity and would therefore generate GHG emissions. GHG emissions from construction activities would result primarily from use of heavy-duty equipment, worker commute trips, vendor truck trips, and haul truck trips. Construction activities would be relatively small in scale and would not include construction of new buildings or structures. Additionally, Actions T-2.1 and T-2.2 would promote the use of alternative fuel in construction equipment and would, therefore, reduce GHG emissions resulting from the combustion of fossil fuel related to construction activities if otherwise not implemented.

Operational emissions would be primarily from mobile sources (i.e., transportation and maintenance trips for infrastructure), but overall, the proposed measures and their

associated actions are anticipated to reduce long-term GHG emissions by reducing the amount of fossil fuels combusted primarily from reduced vehicle use trips regionally, which would offset any increased vehicle trips associated with maintenance, reduced VMT, and increased alternative fuel use. It is reasonable to assume that implementation of the measures and actions would result in reductions in GHG emissions because these measures would collectively reduce the amount of fossil fuel consumed for transportation-related activities. Action T-3.1 would involve the installation of publicly accessible EV chargers, while other transportation-related actions such as Action T-6.1 would encourage alternative transportation such as biking and walking; Action T-6.2 would additionally reduce VMT, vehicle trips, and idling time through improving traffic efficiency in the county through roadway improvements.

Thus, any temporary GHG emissions during implementation of these measures and their associated actions would be offset by the by the overall net benefit of transportation-related GHG emissions reductions after implementation of the measures and their associated actions in the built environment and transportation group. Therefore, implementation of the measures within the built environment and transportation group would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Additionally, all projects resulting from the implementation of these measures and actions would be subject to applicable adopted General Plan policies (see Section 2.8.2, “Regulatory Framework”). These policies would further reduce impacts associated with the built environment and transportation. For example, General Plan Policy CC-1.4 includes review of traffic operations to implement measures that improve flow and reduce idling such as improving traffic signal synchronization and decreasing stop rate. These policies would collectively reduce GHG emissions by reducing vehicle idle time, reducing VMT, and reducing vehicle trips within the county, therefore reducing the combustion of fossil fuels for transportation and associated GHG emissions. The impact would be less than significant.

Summary

The CAP Update would not generate GHG emissions that may have a significant impact on the environment. Construction related to implementation of the measures and their associated actions could result in emissions of GHGs. However, the CAP Update has been developed to reduce GHG emissions associated with buildout of the General Plan. Construction of any future projects required to implement the CAP Update would be sporadic and inherently short-term and would facilitate the development of projects that would ultimately reduce GHG emissions. In comparison to the emissions estimated in the 2011 GPU PEIR, any increase in GHG emissions associated with construction of projects to implement the CAP Update would be minor when evaluated in the broader scope of the General Plan’s total construction activity.

Operation of the measures and actions would, by design, reduce GHG emissions within the unincorporated county to the extent that the County has done its “fair share” in assisting the state in meeting its long-term GHG reduction targets. These measures and actions would reduce GHG emissions throughout the county through the implementation of actions such as reducing VMT, encouraging EV and alternate transportation use,

incentivizing alternative fuel use in agricultural equipment, increasing the use and generation of renewable energy in the unincorporated county, increasing landfill gas capture at landfills and improving water and energy efficiency in water usage, treatment and transportation activities. Thus, any temporary GHG emissions would be offset by the overall net benefit of GHG emissions reduction. Therefore, implementation of these measures and their associated actions would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Additionally, all projects resulting from the implementation of these measures and actions would be subject to the applicable adopted General Plan policies (see Section 2.8.2, "Regulatory Framework").

Therefore, impacts related to GHG emissions associated with implementation of the solid waste, water and wastewater, agriculture and conservation, energy and built environment and transportation measures and actions in the CAP Update would be less than significant. The findings of the 2011 GPU PEIR concluded that impacts would be less than significant with mitigation; however, the CAP Update would not result in a significant impact warranting the implementation of mitigation for the reasons identified above. Therefore, implementation of the CAP Update **would not result in new or more severe impacts** than disclosed the 2011 GPU PEIR.

2.8.3.4 Issue 2: Conflict with an Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

Guidelines for Determination of Significance

Based on Appendix G of the State CEQA Guidelines, which has been updated since the certification of the 2011 GPU PEIR, the project would have an impact if it would:

- conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Impact Analysis

2011 GPU PEIR Determination

The 2011 GPU PEIR evaluated the potential effects of the General Plan related to consistency with the goals and strategies of AB 32 as well as the effects of global climate change on the General Plan. It was projected that the General Plan would result in increased emissions of 24 percent over 2006 levels, and a 36 percent increase from estimated 1990 levels by 2020. This was considered a potentially significant impact in regard to conflict with AB 32 prior to mitigation. Additionally, it was determined that impacts related to the effect of climate on the General Plan would be potentially significant because it was projected that the effects of climate change would impact water supply, wildfires, energy needs, and public health in the county. Both of these impacts were considered less than significant with mitigation General Plan policies and mitigation measures in addition to compliance with applicable regulations such as the CAA,

Lieberman-Warner Climate Security Act, CARB standards, Title 24 standards, EO S-3-05, AB 32, EO S-01-07, SB 97, SB 1368, SB 1078, SDAPCD standards and existing County programs and policies, would mitigate the potential impacts of GHG emissions on global climate change to a less-than-significant level.

CAP Update Impact Analysis

The strategies, measures, and actions included in the CAP Update were developed in consideration of the long-term GHG reduction goals of the 2022 Scoping Plan. Appendix D of the 2022 Scoping Plan identifies three key sectors that may be targeted during CAP development to ensure that local governments are doing their "fair share" in assisting the state in meeting its long-term GHG reduction goal of achieving carbon neutrality and reducing statewide emissions by 85 percent from a 1990 baseline level by 2045. These include building decarbonization (i.e., the full electrification of development and elimination of on-site natural gas usage), VMT reduction, and the electrification of the mobile source sector. The CAP Update has been prepared in consideration of reducing natural gas usage, reducing VMT within the county and from County operations, and the transition to EVs from internal combustion engine vehicles.

The 2022 Scoping Plan includes Appendix D "Local Actions" which advises local governments on actions which can be taken at the local level to achieve the GHG reduction goals of the 2022 Scoping Plan. Appendix D "Local Actions" includes a table of "priority strategies" which was developed by CARB staff to provide a list of the most impactful strategies local governments can take to reduce GHGs (CARB 2022). This table is provided at the end of this section. These areas and strategies are designated "priority" because they are the GHG reduction opportunities over which local governments have the most authority and the highest GHG reduction potential. According to CARB, by prioritizing climate action in these areas, local governments will be addressing the largest sources of emissions under their authority and meaningfully tackling climate change, as well as aligning with State climate goals and protecting public health and welfare (CARB 2022). Appendix D "Local Actions" also states that local governments should, if feasible, develop CEQA-Qualified CAPs for the purpose of demonstrating projects' consistency with the CEQA-Qualified CAP and therefore demonstrating consistency with the 2022 Scoping Plan.

The types of future projects that would be implemented consistent with the CAP Update also are intended to maintain consistency with the Regional Plan, which encompasses the RTP/SCS required by SB 375 to address the regional approach to achieving GHG reduction targets set by CARB; comply with federal civil rights requirements (Title VI); and address environmental justice considerations, air quality conformity, and public participation. As described above, the 2021 Regional Plan reduces per capita GHG emissions from cars and light-duty trucks to 20 percent below 2005 levels by 2035, exceeding the region's state-mandated target of 19 percent. The 2021 Regional Plan also meets federal air quality conformity requirements.

Implementation of the CAP Update, and in particular those measures and actions aimed at promoting multimodal transportation and reducing VMT, would align with the goals of the Regional Plan by achieving GHG reductions through reductions in anthropogenic GHG emissions. Total emissions generated under the CAP Update may differ from emissions anticipated from the numeric targets established as part of the Regional Plan; the reason is that the CAP mitigates for potential buildout of the County's 2011 General Plan assuming no land use or transportation changes, while the Regional Plan includes SANDAG's anticipated land use and transportation changes. However, the CAP Update does not make land use recommendations or changes; rather it represents implementation of a mitigation measure set forth in the 2011 GPU PEIR requiring preparation of a qualified Climate Action Plan.

As discussed above, the current inventory of GHG emissions reflects existing (2019) conditions (see Table 2.8-3) and extends the analysis of GHG emissions associated with growth in the unincorporated county beyond 2020 to be consistent with recent legislative changes under SB 32 and AB 1279. The project would update and implement Goal COS-20 and Policy COS-20.1 of the General Plan.

Solid Waste Measures and Actions

Actions SW-1.1 and SW-2.1 would result in the diversion of waste from landfills. This could result in increased haul truck trips to and from waste facilities; however, it is anticipated that the haul truck trips to the organics processing facility would displace the haul truck trips that would be diverted from the landfill and would not result in increased emissions from hauling trips. Therefore, a net increase of GHG emissions is not anticipated. Because these actions would not result in an increase in VMT associated with haul trucks, they would therefore not conflict with the goals of the 2022 Scoping Plan or the 2021 Regional Plan, both of which include goals to reduce VMT and associated GHG emissions.

In fact, these measures and actions would align with the 2022 Scoping Plan's goal of reducing fossil fuel consumption by utilizing landfill emissions for energy generation. Action SW-3.1 aims to expand landfill gas systems to increase fugitive gas capture by 5 percent at County-owned landfills to decrease fugitive emissions beyond state requirements. Action SW-4.1 is intended to incentivize gas capture at privately managed landfills to exceed state requirements by 5 percent in the unincorporated area. Both of these actions would reduce emissions of methane. These actions would align with the GHG emissions reduction goals of the 2022 Scoping Plan by capturing emissions of methane from landfills that would otherwise be released into the atmosphere.

Water and Wastewater Measures and Actions

Implementation of the GHG reduction measures and their associated actions which comprise the water and wastewater group would collectively reduce GHG emissions generated within the county by improving water efficiency and reducing water demand, thus reducing GHG emissions associated with water and wastewater treatment and transportation. For example, Actions W-2.1 and W-2.2 would amend the County's Code

of Regulatory Ordinances for new and existing development to require (Tier 2) CALGreen water efficiency requirements, including the installation of stormwater and greywater capture systems. The measures and actions within the water and wastewater group would improve water efficiency and therefore decrease water demand. Because these measures collectively reduce the amount of GHG emissions that would occur from water/wastewater treatment and transportation within the county, it can be assumed that any temporary GHG emissions during implementation of these measures would be offset by the overall net benefit of GHG emissions reductions that would result from implementation of the measures and actions that comprise the water and wastewater group. These reductions in fossil fuel combustion and improvements in the efficiency of energy used to treat water would align with the goals of the priority strategies discussed above and presented in Table 2.8-5 by implementing policies and retrofits which would improve energy efficiency (i.e., the more efficient use of energy in water treatment).

Agriculture and Conservation Measures and Actions

Implementation of these measures and actions would collectively reduce GHG emissions generated within the county by incentivizing the transition to cleaner fuels, promoting the efficient use of energy and water, reducing the need for cooling through the planting of trees in residential areas, and reducing VMT associated with food delivery and farmer commutes. First, Actions A-1.1 and A-1.2 would involve the preservation and restoration of natural lands, consistent with the conservation and restoration goals of the 2022 Scoping Plan. Action A-2.1, which would increase tree planting in residential and nonresidential areas, would not reduce GHG emissions but would instead aid in the removal of GHGs from the atmosphere through carbon sequestration. Actions A-1.2 and A-4.1 would also increase carbon sequestration through the restoration of natural lands. Additionally, actions that would involve tree planting in residential areas could reduce electricity demand, and therefore fossil fuel use, associated with the use of air conditioning by providing shade as well as reduce water demand for watering as compared to baseline water demand without implementation of the CAP Update measures, as it is assumed that new trees would be drought tolerant. This would align with the GHG reduction goals of the 2022 Scoping Plan by reducing GHG emissions associated with electricity generation. Additionally, Action A-4.1 would involve the development of a ~~Carbon Farming~~ Climate Smart Land Stewardship Program to increase carbon sequestration on 3,000 acres by 2030. Action A-5.1 would reduce GHG emissions associated with agricultural operations in the area by 3 percent by developing a program to incentivize a transition to cleaner fuels (e.g., renewable diesel, electric equipment) and the efficient use of energy and water (e.g., LED grow lights and water re-use). These measures and actions would align with the goals of the 2022 Scoping Plan by increasing carbon sequestration and reducing fossil fuel use for electricity generation. Lastly, Actions A-4.1.a and A-4.1.b would reduce GHG emissions from vehicle trips by developing a food sourcing policy to prioritize local food suppliers and evaluating opportunities to build additional housing to reduce trip lengths for farmer workers, respectively. This would align with the goals of the 2021 Regional Plan by reducing VMT and associated GHG emissions. This would also align with the goals of the priority strategies discussed above and presented in Table 2.8-5 by preserving natural and working lands, as well as increasing energy efficiency.

Energy Measures and Actions

Measures and actions included in the energy group would collectively reduce the demand and usage of fossil fuels for energy generation in both residential and nonresidential applications by retrofitting existing buildings to improve energy efficiency, requiring that new residential, commercial, and industrial development be all-electric, and increasing renewable energy use and generation. These measures and actions would assist the state in meeting its carbon neutrality goals by decarbonizing existing and future development, a goal of the 2022 Scoping Plan. These measures and actions would also be consistent with the General Plan, which also includes policies that would reduce impacts related to energy. For example, General Plan Policy COS-14.7 encourages development projects that use energy recovery, PV, and wind energy. Policy COS-18.3 requires alternative energy system operators to properly design and maintain alternative systems to minimize adverse impacts to the environment. This policy would apply to energy systems developed through implementation of the CAP Update. The measures and actions in the CAP Update would aid in improving energy efficiency in the county and reducing emissions associated with the generation of electricity. This would further align with the goals of the 2022 Scoping Plan.

Actions E-1, E-2, and E-3 collectively reduce the demand and usage of fossil fuels in both residential and nonresidential applications by retrofitting existing buildings to improve energy efficiency, requiring that new residential, commercial, and industrial development be all-electric, and increasing renewable energy use and generation. These actions would be conducive to assisting the state in meeting its carbon neutrality goals by decarbonizing existing and future development. This would also align with the goals of the priority strategies discussed above and presented in Table 2.8-5 by facilitating the deployment of renewable energy production and increasing energy efficiency in new and existing development.

Built Environment and Transportation Measures and Actions

Measures and actions related to the built environment and transportation would encourage the use of alternatively fueled vehicles through the implementation of actions such as Actions 3.1 and 3.1.a which would involve the installation of EV chargers and incentivize hydrogen fueling stations, thus facilitating the statewide goal of transitioning the on-road vehicle fleet to be fully electric. Other transportation-related actions such as Action T-6.1 would encourage alternative transportation such as biking and walking; Action T-5.1.b would reduce VMT, vehicle trips, and idling time through improving traffic efficiency in the county through roadway improvements. These improvements would reduce GHG emissions resulting from the combustion of fossil fuel by reducing gasoline and diesel fuel consumption as well as reducing VMT, which aligns with the goals of Appendix D of the 2022 Scoping Plan to lower statewide VMT. This would also align with the goals of the priority strategies discussed above and presented in Tables 2.4-8 and 2.8-5 by increasing the electrification of transportation and increasing access to clean mobility options. While the construction required to implement these measures may require some energy consumption, ultimately the measures would improve energy efficiency and reduce fossil fuel consumption. Action T-1.1.a would promote the use of

alternative fuel in construction equipment and reduce the consumption of gasoline and diesel fuel. Therefore, construction associated with implementation of the CAP Update would not prohibit the County from meeting its fair share of emissions reductions, nor would it obstruct statewide achievement of the GHG reduction goals outlined in the 2022 Scoping Plan.

The 2021 Regional Plan, which focuses on transportation efficiency, energy efficiency, air quality improvement, vehicle electrification, improving multimodal transportation options and viability, and achieving GHG reduction targets, would also be relevant to the implementation of the CAP Update. As discussed above in Criterion (a), although implementation of the CAP Update would emit some GHGs during construction and operation, GHG reduction measures such T-4.1, T-4.2, T-4.3, and T-4.6 would involve the installation of EV chargers and hydrogen fueling stations thus facilitating the statewide goal of transitioning the on-road vehicle fleet to be fully electric. Other transportation-related measures such as T-6.1 would encourage alternative transportation such as biking and walking and therefore reduce VMT in the county. Measures and their associated actions that support the conversion from gasoline or diesel to electricity or alternative fuels and reduce VMT in the county would directly support 2021 Regional Plan goals and strategies.

Summary

Implementation of the CAP Update would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. The CAP Update would result in decreased GHG emissions compared to the baseline and would achieve the GHG reduction targets for 2030 and 2045. See Tables 2.8-4 and 2.8-5 for a summary of GHG reductions and a comparison to the GHG reduction targets. Modeling was also conducted to evaluate GHG reductions that would result from implementation of the CAP Update for 2035 and 2040.

All GHG-related measures within the CAP Update would support the 2022 Scoping Plan's goal of achieving GHG reduction targets because the CAP Update is intended to reduce GHG emissions generated within the county and from County operations. Additionally, CAP Update measures and actions which reduce VMT and transportation-related GHG emissions would also support the goals of the 2021 Regional Plan. Therefore, impacts related to adherence with the goals of applicable GHG reduction plans would be less than significant. The findings of the 2011 GPU PEIR concluded that impacts would be less than significant with mitigation; however, the CAP Update would not result in a significant impact warranting the implementation of mitigation for the reasons identified above. Therefore, implementation of the CAP Update **would not result in new or more severe impacts** than disclosed the 2011 GPU PEIR.

2.8.3.5 Cumulative Impact Analysis

As explained in the 2011 GPU PEIR (pages 2.17-27 and 2.17-28), climate change is a "global phenomenon which is cumulative by nature." This analysis uses the same scope

identified in the 2011 GPU PEIR. Therefore, the impacts of CAP Update implementation described above also serve as the proposed project's cumulative analysis.

The scope and approach to the cumulative impact analysis are described in the "Cumulative Impact Assessment Overview" section in the introduction to this chapter.

Issue 1: Result in Cumulatively Considerable GHG Emissions That May Have a Significant Impact on the Environment

Climate change is the result of the combined, worldwide contributions of GHG to the atmosphere. Cumulative development has resulted in a cumulatively significant effect. The 2011 GPU PEIR concludes that General Plan policies and mitigation measures would reduce cumulative impacts of the General Plan such that the General Plan would not result in cumulatively considerable GHG emissions that would have a significant impact on the environment.

Global climate change is inherently cumulative; thus, impacts associated with the CAP Update discussed above in Section 2.8.3.3, "Issue 1: Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment," also serve as the proposed project's cumulative impact analysis. Therefore, pursuant to the impact analysis above, the project would not result in a considerable contribution to a cumulative impact. The impact would be less than significant. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

While the CAP Update has no cumulative GHG impacts of its own, and any in-process GPAs will be required to analyze their own GHG impacts without reliance on the CAP Update or this SEIR analysis, Chapter 4 of this SEIR addresses potential cumulative impacts of in-process GPAs.

Issue 2: Result in a Cumulatively Considerable Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

Climate change is the result of the combined, worldwide contributions of GHG to the atmosphere. Cumulative development has resulted in a cumulatively significant effect. The 2011 GPU PEIR concludes that General Plan policies and mitigation measures would reduce cumulative impacts of the General Plan such that the General Plan would not result in cumulatively considerable conflict with an applicable plan, policy, or regulation related to GHG emissions.

As described above, because global climate change is inherently cumulative, impacts associated with the CAP Update discussed above in Section 2.8.3.4, "Issue 2: Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs," also serve as the cumulative impact analysis for the CAP Update. Therefore, pursuant to the impact analysis above, the project would not result in a considerable contribution to a cumulative impact. The impact would be less than significant. There **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

While the CAP Update has no cumulative GHG impacts of its own, and any in-process GPAs will be required to analyze their own GHG impacts without reliance on the CAP Update or this SEIR analysis, Chapter 4 of this SEIR addresses potential cumulative impacts of in-process GPAs.

2.8.4 Summary of New or More Severe Significant Impacts

Implementation of the CAP Update would not generate significant GHG emissions nor would the CAP Update conflict with the goals of SB 32 and AB 1279. Implementation of the CAP Update would not result in new or more severe significant impacts related to GHG emissions.

2.8.5 Mitigation Measures

As discussed in Section 2.8.3, "Analysis of Effects and Significance Determinations," the CAP Update would result in less-than-significant impacts because the CAP Update would result in substantial GHG reductions from implementation of GHG reducing actions. While emissions would be generated during the construction period of implementing GHG reducing actions, this level of emissions would be offset by the GHG benefits acquired though renewable energy, solid waste management, VMT reductions, electrification of the mobile source sector, carbon sequestration, and efficient water usage and wastewater treatment. Therefore, the mitigation identified in the 2011 GPU EIR are not necessary to reduce impacts and no new mitigation measures would be required.

2.8.6 Significance Conclusions

Issue 1: Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

The goal of the CAP Update is to reduce GHG emissions generated within the county by increasing the use of alternatively fueled vehicles, reducing VMT, generating and utilizing renewable energy, reducing waste generation, and increasing carbon sequestration. While construction related to the CAP Update implementation would result in some GHG emissions, the measures and actions would result in an overall net reduction in GHG emissions, as described in the analysis above. Thus, implementation of the CAP Update would not result in the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment. This impact would be **less than significant** and the project **would not result in a considerable contribution** to a significant cumulative impact. This **would not be a new or more severe impact** than identified in the 2011 GPU PEIR.

Issue 2: Conflict with an Applicable Plan, Policy or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

As stated previously, all GHG-related measures within the CAP Update would support the 2022 Scoping Plan and the 2021 Regional Plan's goal of achieving GHG reduction targets because the CAP Update is intended to reduce GHG emissions generated within

the Plan Area. The proposed CAP Update would not conflict with or obstruct implementation of 2022 Scoping Plan or the 2021 Regional Plan as the measures themselves have been developed in consideration of these plans and their GHG reduction goals. Therefore, implementation of the measures and actions described above would not conflict with these plans. This impact would be **less than significant** and the project **would not result in a considerable contribution** to a significant cumulative impact. This **would not be a new or more severe impact** than identified in the 2011 GPU PEIR.

Table 2.8-2 Statewide Greenhouse Gas Emissions by Economic Sector in 2020

Sector	Emissions (MMTCO2e)	Percent
Transportation	136	37
Industrial	73	20
Electric Power	60	16
Commercial & Residential	39	11
Agriculture	32	9
High GWP	21	6
Recycling & Waste	9	2
Total	369	100

Notes: Totals may not sum due to rounding.

$MMTCO_2e$ = million metric tons of carbon dioxide equivalent.

Source: CARB 2022a.

Table 2.8-3 County Greenhouse Gas Emissions Inventory by Sector in 2019

Sector	Emissions ($MTCO_2e$)	Percent
On-road Transportation	1,331,000	45
Electricity	599,000	20
Natural Gas	478,000	16
Waste	193,000	6
Agriculture	134,000	4
Propane	121,000	4
Off-road Transportation	71,000	2
Water	39,000	1
Wastewater	18,000	1
Total	2,984,000	100

Notes: Totals may not sum due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Modeling by Ascent Environmental 2023.

Table 2.8-4 Summary of GHG Reductions by CAP Update Strategy

CAP Strategy	Measure	MTCO2e Reductions by Target Year	
		2030	2045
Transportation and Built Environment			
Decarbonize the On-Road and Off-Road Vehicle Fleet	T-1: Reduce fleet and small equipment emissions from County Operations	7,905	13,255
	T-2: Increase the use of low-carbon and zero-emission landscaping and off-road construction equipment in the unincorporated area	9,710	86,376
	T-3: Install electric vehicle charging stations and provide incentives for zero-emissions vehicles in the unincorporated area	218,884	297,184
Support Active Transportation and Reduce Single-Occupancy Vehicle Trips	T-4: Reduce emissions from County employee commutes	13,703	10,408
	T-5: Improve County roadways to encourage walking, biking, rolling to/from transit and destinations and increase transportation efficiency	1,970	2,882
	T-6: Support transit and transportation demand management to reduce single occupancy vehicle trips in the unincorporated area	16,660	38,637
Energy			
Increase Building Energy Efficiency, Renewable Energy, and Electrification in the Unincorporated Area and County Operations	E-1: Develop policies and programs to increase energy efficiency, renewable energy use, and electrification in County Operations	13,715	16,858
	E-2: Develop policies and programs to increase energy efficiency and electrification in the unincorporated area	142,476	519,440
	E-3: Develop policies and programs to increase renewable energy use, generation, and storage in the unincorporated area	176,906	0
Solid Waste			
Increase Solid Waste Diversion in the Unincorporated Area and County Operations	SW-1: Achieve zero waste in County operations	1,048	1,571
	SW-2: Achieve zero waste within the unincorporated area	37,804	57,779
Increase Availability of Sustainable Solid Waste Facilities in the Unincorporated Area and County Operations	SW-3: Improve waste management practices at County-owned solid waste facilities to reduce emissions	0	9,283
	SW-4: Improve waste management practices in the unincorporated area to reduce emissions and increase waste diversion	1,373	60,164

CAP Strategy	Measure	MTCO2e Reductions by Target Year	
		2030	2045
Water and Wastewater			
Decrease Potable Water Consumption in the Unincorporated Area and County Operations	W-1: Develop policies and programs to increase water efficiency, retention, recycling, and reuse to reduce potable water consumption in County operations	3	0
	W-2: Develop policies and programs to increase indoor and outdoor water conservation (including water efficiency, retention, recycling, and reuse) in new and existing development in the unincorporated area	442	0
Increase Stormwater Collection, Water Pumping, and Wastewater Treatment Efficiency	W-3: Develop programs to increase stormwater and wastewater treatment efficiency to reduce imported potable water use in the unincorporated area	10,046	1,869
Agriculture and Conservation			
Preserve Natural Lands and Improve Land Management Practices to Protect Habitat and Increase Carbon Storage	A-1: Acquire and manage conservation lands to preserve natural lands and maximize carbon storage potential in the unincorporated area	63,319	92,441
	A-2: Develop a tree planting program that expands canopy across the unincorporated area and prioritizes underserved communities	2,937	6,776
Support Climate-Friendly Farming Practices and Preserve Agricultural Land	A-3: Preserve agricultural lands to prioritize carbon storage and balance economic and development goals	9,699	17,327
	A-4: Incentivize carbon farming to expand carbon storage capacity on agricultural land and support climate-friendly farming practices in the unincorporated area	10,758	121,556
	A-5: Reduce greenhouse gas emissions from agricultural operations	1,559	19,638
Total GHG Emissions Reductions		**740,914**	**1,373,447**

Notes: Totals may not sum due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent.

[1] **Emissions reductions for these measures/actions were only projected out to 2040 as Action W-1.1 and Actions W-2.1 and W-2.2 set target years of 2030 and 2026, respectively, for their implementation.**

[2] **Modeling for the actions which comprise Measure W-2 showed no measurable emissions reductions past 2040.**

Source: Modeling by Ascent Environmental 2023.

Table 2.8-5 Summary of CAP Targets and Reductions Achieved

	$MTCO_2e$ by Target Year	
	2030	2045
Anthropogenic Emissions		
Total GHG Emissions with Anthropogenic GHG Emissions Reductions	1,669,858	435,369
Percent reduction below 2019 levels	44.0%	85.4%
Carbon Storage		
GHG Emissions Removed by Carbon Storage Measures	13,771	129,556
Total GHG Emissions with Anthropogenic GHG Emissions Reductions and Carbon Storage Measures	1,656,086	305,813
Percent reduction below 2019 levels	44.5%	89.8%
Target Reduction Below 2019 Levels	43.6%	85.4%
Meets Target?	Yes	Yes

Notes: Totals may not sum due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent.

Source: Modeling by Ascent Environmental 2023.

Table 2.8-6 Priority GHG Reduction Strategies for Local Government Climate Action

Priority Areas	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV)
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as permit streamlining, infrastructure siting, consumer education, or preferential parking policies)
VMT Reduction	Reduce or eliminate minimum parking standards in new developments
	Adopt and implement Complete Streets policies and investments, consistent with general plan circulation element requirements
	Increase public access to shared clean mobility options (such as planning for and investing in electric shuttles, bike share, car share, transit)
	Implement parking pricing or transportation demand management pricing strategies
	Amend zoning or development codes to enable mixed-use, walkable, and compact infill development (such as increasing allowable density of the neighborhood)
	Preserve natural and working lands
Building Decarbonization	Adopt all-electric new construction reach codes
	Adopt policies and incentive programs to implement energy efficiency retrofits (such as weatherization, lighting upgrades, replacing energy intensive appliances and equipment with more efficient systems, etc.)
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings
	Adopt policies and incentive programs to reduce electrical loads from equipment plugged into outlets (such as purchasing Energy Star equipment for municipal buildings, occupancy sensors, smart power strips, equipment controllers, etc.)
	Facilitate deployment of renewable energy production and distribution and energy storage

Source: CARB 2022.